System Planning & Analysis Report

S-106

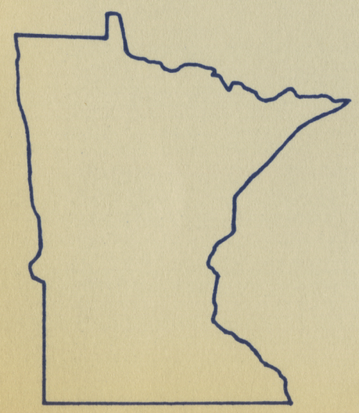
T. H. 19
CANNON FALLS BYPASS

S. P. 2503

JULY, 1972

PREPARED BY

OFFICE OF SYSTEM PLANNING



MINNESOTA
DEPARTMENT
OF HIGHWAYS

ADMIN 1000

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STATE OF MINNESOTA

Office Memorandum

DEPARTMENT HIGHWAY - Statewide Planning
Room 807 - Ext. 3158

DATE: July 17, 1972

TO : Paul G. Velz
Road Design Engineer

FROM : Morris Gildemeister, Chief
Statewide Planning Section

SUBJECT: T.H. 19, Cannon Falls Bypass, S.P. 2503
System Planning and Analysis Report S-106

R. P. Klobuchar requested this traffic report on May 3, 1972.

The project location is shown on the statewide work map on page 2.

The 1972 and 1998 ADT shown on the map on page 3 assume a completed bypass. The 1998 ADT is tabulated by vehicle type and DHV on page 4.

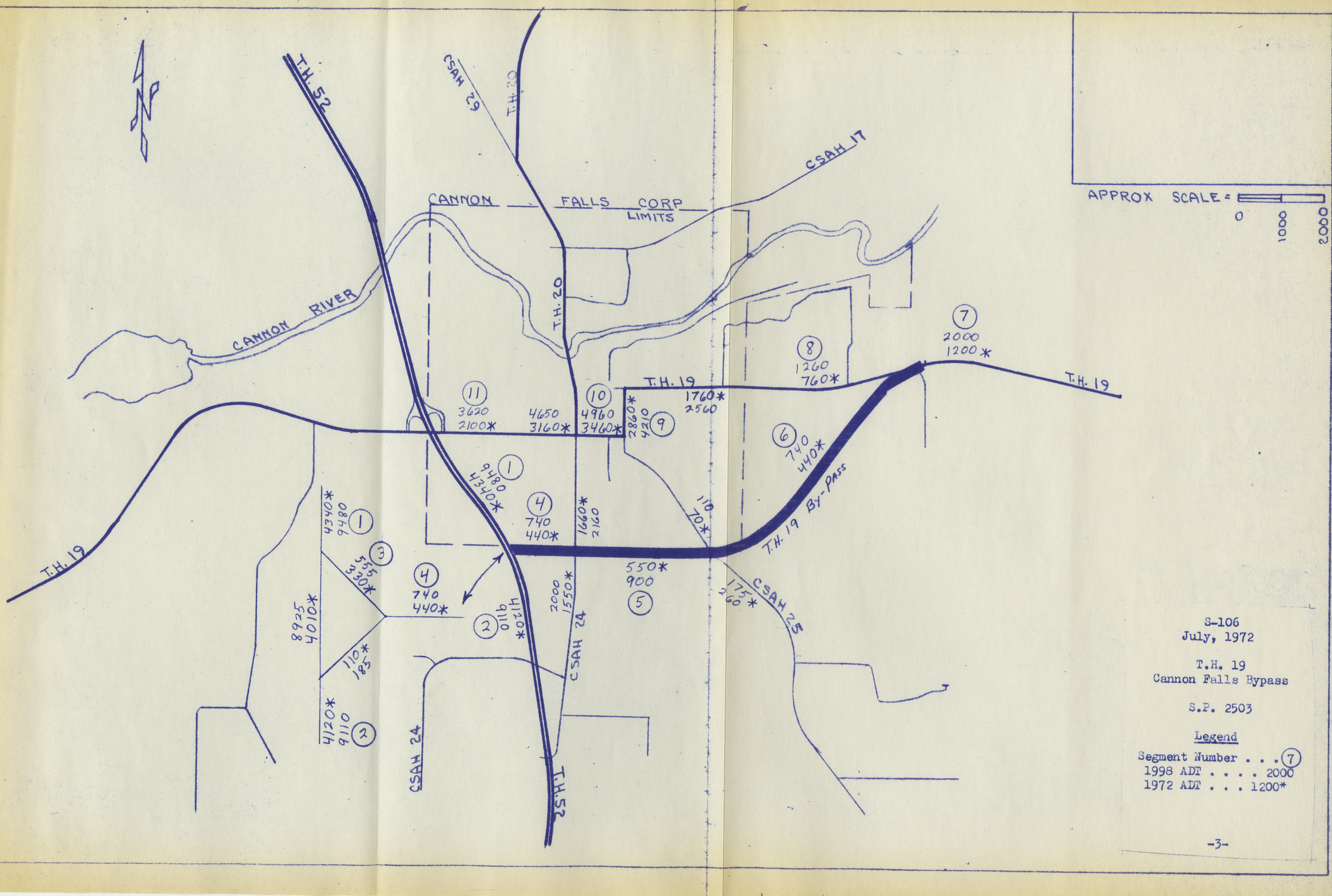
A description of the report preparation is on page 5.

Morris Gildemeister

Morris Gildemeister, Chief
Statewide Planning Section

CD

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS
WORK MAP



S-106
July, 1972

T.H. 19
Cannon Falls Bypass

S.P. 2503

Legend

Segment Number . . . (7)
1998 ADT 2000
1972 ADT . . . 1200*

Form 2985 (9-63)

TRAFFIC ESTIMATE DATA

DESIGN YEAR 1998 PART 1 OF 1

FOR

T.H. 19 S.P. 2503 LENGTH - MILES

COUNTY Goodhue LOCATION Cannon Falls

Bypass

BASED ON

1998 ADT FROM TRAFFIC ANALYSIS UNIT

SHOWING

TOTAL ADT ON SEGMENTS 1 THROUGH 11 AS

DEFINED ON ATTACHED INDEX MAP

VEHICLE * TYPE	SEGMENT NUMBER										
	1	2	3	4	5	6	7	8	9	10	11
0	8508	8232	436	596	751	596	1706	1110	4010	4726	3422
1	164	156	12	16	20	16	82	66	84	96	82
2	96	92	6	8	9	8	26	18	22	25	20
3	12	10	3	4	4	4	5	1	1	1	1
4	48	46	3	4	4	4	5	1	1	2	1
5	586	510	92	108	108	108	116	8	12	28	20
6	66	64	3	4	4	4	60	56	80	82	74
TOTAL ADT	9480	9110	555	740	900	740	2000	1260	4210	4960	3620
TOTAL H. COMM. ADT	972	878	119	144	149	144	294	150	200	234	198
TOTAL DHV	1085	1038	69	91	108	91	242	151	505	595	434
DIRECTIONAL DISTRIBUTION	60-40	60-40	60-40	60-40	60-40	60-40	60-40	60-40	60-40	60-40	60-40

* VEHICLE TYPE CODE

0 = PASSENGER CARS AND 4 TIRE TRUCKS
1 = SINGLE UNIT-2 AXLE-6 TIRE TRUCKS
2 = SINGLE UNIT-3 AXLE TRUCKS
3 = TRACTOR-TRUCK OR SEMI-TRAILER- 3 AXLES
4 = TRACTOR-TRUCK OR SEMI-TRAILER - 4 AXLES
5 = TRACTOR-TRUCK OR SEMI-TRAILER - 5 AXLES
6 = BUSES AND TRUCKS WITH TRAILERS

Description of Report Preparation

1998 ADT on T.H. 19 east of Cannon Falls was established by the following method:

The 1990 summer weekday travel from the System 4 "Statewide Model" was obtained. This assignment uses the population projection factors and expected increase in travel per capita. The summer weekday volume was adjusted to ADT by using one of four factors developed to convert summer weekday volumes to ADT, depending on the seasonal variation of the road. An extrapolation of the 1970 ADT and 1990 ADT produced the 1998 ADT. This was compared to the results of a least square trend of the historical ADT and the answers were very similar.

The volumes on T.H. 52 also follow the System 4 assignment when seasonal adjustments and extrapolation have been made.

The through trips which would use the T.H. 19 bypass were calculated by studying the turning movements of the System 4 assignment. Again these had to be seasonally adjusted and converted to 1998 ADT.

An analysis of the System 4 triptab gave point to point movements. By using this, it was determined that for every four through trips on T.H. 19, three were coming from the west of T.H. 19 and one was coming from the south on T.H. 52.

The traffic on T.H. 19 through Cannon Falls was developed by comparing an April 1962 Traffic Flow Map with ADT at the corporate limits. This report is also consistent with the volumes in S-38 transmitted in February 1971, when allowances are made for differences in design years.

Information concerning truck traffic to grain companies in Red Wing was supplied to us by the District. This was used in conjunction with manual vehicle classification counts which were taken in Cannon Falls in January 1971 and May 1972. The vehicle type distribution in this report is somewhat different from that used in S-38 based on the data from the grain companies and the May 1972 class counts which were taken for a 24 hour period. These counts were adjusted to 1998 values through use of a statewide vehicle type trends study.

The DHV was calculated by comparing hourly counts recorded in the study area to data provided by continuously operated traffic recorders located on roads which are assumed to have similar seasonal and daily travel patterns.

Also requested for this project was a peak day volume and heavy commercial volume for 1998. The peak day volume on the T.H. 19 bypass would be 1100. This was obtained by checking peak days at automatic traffic recorder stations located on similar roads. The peak heavy commercial volumes on the by pass would be 325, which is the result of studying the grain truck data.